WHAT IS CLAIMED IS

1. An epicycloidal motor comprising a stator core formed by a combination of multiple split core pieces, and a stator winding conductor wound on the slot of said stator core, wherein the ratio of the overall effective area of said conductor (including the coating of an insulator, etc.) to the effective sectional area of said slot is 0.5 through 0.8.

2. An epicycloidal motor according to Claim 1 characterized in that a tee as said split core piece comprises:

a tee base;

a tee column extending along the periphery from said tee base; and

a tee flange extending in the circumferential direction on both sides of the tip of said tee column;

said motor further characterized in that said slots are formed on the inner periphery of the tee flange and on both sides of the tee column, and the outer periphery of said tee flange is formed in a circular arc and flat inclinations are arranged on both ends of the outer periphery.

3. An epicycloidal motor according to Claim 2 characterized in that the ratio of the range angle of said flat inclination as viewed from the center of said stator core relative to the range angle of said circular arc as viewed from the center of said stator core is 0.2 through 0.75.

4. An epicycloidal motor according to Claim 1 characterized in that tee as said split core piece comprises:

a tee base;

a tee column extending along the periphery from said tee base; and

a tee flange extending in the circumferential direction on both sides of the tip of said tee column;

said motor further characterized in that said slots are formed on the inner periphery of the tee flange and on both sides of the tee column; and the ratio of the open angle of the slot inlet as the gap between the ends of adjacent tee flanges is viewed from the center of said stator core, relative to the angle in the arrangement interval of said tee is 0.04 through 0.3.

5. An epicycloidal motor according to Claim 1 characterized by further comprising:

a rotor rotating on the outer periphery of the stator core; and

a rotor magnet arranged face to face with the outer periphery of the stator core;

wherein the ratio of the thickness of the rotor magnet in the axial direction along the axial direction of the rotary shaft of the rotor relative to the thickness of said stator core in the axial direction is 0.6 through 0.9.

6. An epicycloidal motor according to Claim 1 characterized by further comprising an annular housing

connecting said split core piece, wherein a tee as split core piece comprises:

a tee base;

a tee column extending along the periphery from said tee base; and

a tee flange extending in the circumferential direction on both sides of the tip of said tee column;

said motor further characterized in that said slots are formed on the inner periphery of the tee flange and on both sides of the tee column, and residual stress subsequent to connection where said adjacent tee bases are pressed against each other by connection to said housing does not exceed 50 MPa.

7. An epicycloidal motor comprising a stator core formed by a combination of multiple split core pieces, and a stator winding conductor wound on the slot of said stator core, wherein a tee as split core piece comprises:

a tee base;

a tee column extending along the periphery from said tee base; and

a tee flange extending in the circumferential direction on both sides of the tip of said tee column;

said motor further characterized in that:

said slots are formed on the inner periphery of the tee flange and on both sides of the tee column;

the ratio of the angle of the tee column width as the width of said tee column on the end of the outer periphery is viewed from the center of said stator core,

relative to the angle in the arrangement interval of said tee is 0.18 to 0.34; and

the ratio of the overall effective area of said conductor (including the coating of an insulator, etc.) to the effective sectional area of said slot is 0.5 through 0.8.

8. An epicycloidal motor comprising:

a stator core formed by a combination of multiple split core pieces;

a stator winding conductor wound on the slot of said stator core;

a rotor rotating on the outer periphery of the fixed core;

a rotor magnet provided on said rotor and arranged to face the outer periphery of the stator core; and

a magnetic pole sensor such as a hall element for detecting the magnetic pole position of said rotor magnet;

said motor further characterized in that said magnetic pole sensor is located at the position shifted by an electric angle of 10 to 20 degrees in the direction of current running from the reference line extending through the center of said slot; and the ratio of the overall effective area of said conductor (including the coating of an insulator, etc.) to the effective sectional area of said slot is 0.5 through 0.8.

9. An epicycloidal motor according to Claim 1 characterized in that said conductor has a cross section

of a circular form, and is wound on the slot in a regular winding method.

10. An epicycloidal motor according to Claim 2 characterized in that said conductor has a cross section of a circular form, and is wound on the slot in a regular winding method.

11. An epicycloidal motor according to Claim 3 characterized in that said conductor has a cross section of a circular form, and is wound on the slot in a regular winding method.

12. An epicycloidal motor according to Claim 4 characterized in that said conductor has a cross section of a circular form, and is wound on the slot in a regular winding method.

13. An epicycloidal motor according to Claim 5 characterized in that said conductor has a cross section of a circular form, and is wound on the slot in a regular winding method.

14. An epicycloidal motor according to Claim 6 characterized in that said conductor has a cross section of a circular form, and is wound on the slot in a regular winding method.

15. An epicycloidal motor according to Claim 7 characterized in that said conductor has a cross section of a circular form, and is wound on the slot in a regular winding method.

16. An epicycloidal motor according to Claim 8 characterized in that said conductor has a cross section

of a circular form, and is wound on the slot in a regular winding method.